REMARKS

In the Office Action mailed July 1, 2003, the Examiner noted that claims 1-17 and 19-21 were pending, that claim 18 had been withdrawn from consideration, objected to claims 9 and 10 and rejected claims 1-7, 11-17 and 19-21. Claims 1-5,7-11,14,16,17 and 19-21 have been amended, new claims 22-24 have been added and, thus, in view of the forgoing claims 1-17 and 19-24 remain pending for reconsideration which is requested. No new matter has been added. The Examiner's rejections and objections are traversed below.

In the Office Action the Examiner objected to claims 9 and 10 and indicated that these claims would be allowable if rewritten in independent form. Claims 9 and 10 have been rewritten into independent form as new claims 22 and 23. These claims have been so rewritten to address the Examiners indefiniteness rejection of claim 5. It is submitted that these claims are allowable.

In the Office Action the Examiner rejected claims 3, 5-10, 17 and 21 under 35 U.S.C. section 112 paragraph 2 as indefinite. The claims have been amended in consideration of the Examiner's comments and it is submitted they satisfy the requirements of the statute. If additional concerns with the claims arise, the Examiner is invited to telephone to resolve the same. Suggestions by the Examiner are also welcome. Withdrawal of the rejection is requested.

On page 3 of the Office Action the Examiner rejected claims 1-8, 11-14 and 16-21 under 35 U.S.C. § 102 as anticipated by Kamitani.

The present invention is solving a problem found in the prior art of feature extraction where characters within a character string touch or overlap. The present invention sets, in advance, a feature amount for a category, such as a particular character, say the letter "a" (see "setting unit" - claim 1). This amount could be a width (or height or both) of the pixels for the letter "a". As a result, the feature amounts for the features to be recognized, say the letters of the alphabet, are set in advance. A feature amount extraction unit (see claim 1) extracts a feature amount from an image. This feature amount from the image is compared to the amount for the category (see "comparison unit" - claim 1). Based on the result of this comparison (or the differences in the image and category feature amounts) a segmenting unit (see claim 1) segments the feature from the image. In this operation the feature amount extracted is compared to all of the feature amounts set in advance and the optimal match and therefore the

optimal extraction point for the feature is determined. This process of extraction of feature amount and comparison is performed for the entire image or charter string and the optimum separation or segmentation points for all of the features are determined. This process is described starting on page 11 of the specification with respect to figures 2A and 2B.

The Kamitani system is fundamentally very different from the present invention. Kamitani is directed to a system that improves character segmentation by excluding overlap between characters in an image or by excluding areas in which characters touch in an image prior to extraction so that positional errors that occur during extraction can be reduced. In Kamitani the character string image is preprocessed by comparing the image to font patterns to determine the character. The identified character is used to determine a part of the font character for which extraction processing is not performed. The part for which extraction is not to be performed is essentially excluded from the extraction by specifying character separating features and the boundary of the character is specified from the separating features.

Kamitani, in particular, does not teach or suggest comparing a feature amount of an image (or image feature size) and a feature amount of a category (or character feature size) as occurs in the feature amount comparison unit of the present invention (see claim 1). The Examiner alleges that the character separating feature extracting area defining unit 131 of Kamitani corresponds to the feature amount comparison unit of the present invention. This unit 131 does not use or compare feature amounts but rather designates areas to be masked from extraction processing. As stated in Kamitani:

> In order to exclude the areas of the image of the character string, in which a touching between adjacent characters may occur, the feature extraction inhibiting area dictionary 132 stores the area, in which the feature extraction processing is not performed, for every font of character.
> The character separating feature extracting area defining unit 131 specifies areas of the image of character string, for which the feature has to be not extracted, by referring to the font of character determined by the character font determining unit 123 and the feature extraction inhibited area dictionary 132 and masks the specified area stored in the image storing unit 110.
> The character separating feature extracting unit 133 extracts character separating features from the image of character string whose areas in which the feature extraction is not performed are masked.

(See Kamitani, col. 4, lines 42-53)

It is submitted that the feature amount comparisons of the present invention are not taught in Kamitani. The comparison of category feature amount with the image feature amount or determination of the differences there between is emphasized in claims 1, 11, 17, 19, 20

("comparing the feature amount of the category with the feature amount of the image"), and claims 5 & 21 ("computing a difference level in a feature amount between the character string image and the category").

It is submitted that the present claimed invention patentably distinguishes over Kamitani and withdrawal of the rejection is requested.

Page 10 of the Office Action rejects claim 15 under 35 U.S.C. § 103 over Kamitani and Tanaka.

As noted above, Kamitani does not teach or suggest using a feature amount to improve extraction. Tanaka adds nothing to Kamitani concerning feature extraction using feature amounts.

In addition, as noted in the portion of Tanaka cited by the Examiner, Tanaka discloses shifting the extraction position to the immediately previous adjacent extraction position (starting again with the previous segmentation) when the next area cannot be segmented. This is in contrast to the present invention of claim 15 that adjusts the current or first segmentation area.

It is submitted that the invention of independent claim 15 distinguishes over the prior art and withdrawal of the rejection is requested.

The dependent claims depend from the above-discussed independent claims and are patentable over the prior art for the reasons discussed above. The dependent claims also recite additional features not taught or suggested by the prior art. For example, claim 2 emphasizes that the comparison unit generates a correspondence relationship between the category feature amount and the image feature amount. The Examiner alleges that the degree of coincidence determined by Kamitani corresponds to this claim. The partial pattern detecting unit 121 of Kamitani determines this degree of coincidence between an image and a font partial pattern to identify a font character so that a part of the image can be excluded. This is in contrast to the amount correspondence of the present invention to determine inclusion. The use of the amount in the present invention is the opposite from the use of the coincidence in Kamitani and is thus inconsistent with the Examiners comparison. The Examiners comparison is inappropriate. It is submitted that the dependent claims are independently patentable over the prior art.

New claim 24 recites that the features of the present invention include scanning a character string image, comparing stored character feature sizes to image feature sizes and determining best matches between them and segmenting based on the best matches. Nothing

in the prior art teaches or suggests such. It is submitted that this new claim distinguishes over the prior art.

It is submitted that the claims satisfy the requirements of 35 U.S.C. section 112. It is also submitted that claims 22 and 23 continue to be allowable. It is further submitted that the claims are not taught, disclosed or suggested by the prior art. The claims are therefore in a condition suitable for allowance. An early Notice of Allowance is requested.

If any further fees, other than and except for the issue fee, are necessary with respect to this paper, the U.S.P.T.O. is requested to obtain the same from deposit account number 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: _____11/13/3_____   By: _____

J. Randall Beckers
Registration No. 30,358

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501